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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,070	12/19/2001	Gordon James Cook	0602-1451.1	8410

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EXAMINER

FONTAINE, MONICA A

ART UNIT PAPER NUMBER

1732

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/025,070	Applicant(s) COOK ET AL	
	Examiner Monica A Fontaine	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-38 and 40 is/are rejected.
- 7) ☒ Claim(s) 39, 41 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/367,379.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/367379, filed on 1 November 1999.

Applicant's claim for domestic priority under 35 U.S.C. 120 is acknowledged.

Claim Objections

Claim 34 is objected to because of the following informalities: It is believed that the word "face" in line 1 should be pluralized. Appropriate correction is required.

Specification

The disclosure is objected to because of the following informalities: Page 18, lines 7 and 8 should be deleted because Figure 6 is described twice and its first description is the same as that of Figure 5.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 34, 39, and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 recites the limitation "the matrices" in line 3. There is insufficient antecedent basis for this limitation in the claim. The term --arrays-- is suggested to replace "matrices".

Claim 39 recites the limitation "the upper and lower reinforcing matrices" in lines 2-4. There is insufficient antecedent basis for this limitation in the claim. The term --arrays-- is suggested to replace "matrices".

Claim 40 recites the limitation "the tooling" in lines 1-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. (U.S. Patent 5,626,234), in view of Lehmann et al. (U.S. Patent 4,861,462).

Regarding Claim 33, Cook et al., hereafter "Cook," show that it is known to form a polymer support frame over which a wire cloth is to be stretched and secured to form a sifting screen (Column 2, lines 15-24), including making a wire frame assembly comprising two parallel spaced apart arrays of reinforcing wires (Column 2, lines 18-24), and wholly encapsulating the

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wire frame having an open central region criss-crossed by intersecting orthogonal ribs bounded on all sides by a rigid flange, the article being such that each of said ribs includes two parallel spaced apart wires of said frame assembly (Column 3, lines 45-63; Column 5, lines 34-54). Cook does not explicitly show the molding process. Lehmann et al., hereafter "Lehmann," show that it is known to place a reinforcing wire assembly in a mould tool (Column 3, lines 17-21; Column 4, lines 49-53), to close the mould tool (Column 4, lines 52-53), to inject liquid polymer into the mould tool by injection moulding so as to wholly encapsulate the wire frame having an open central region criss-crossed by intersecting orthogonal ribs bounded on all sides by a rigid flange (Column 4, lines 21-31, 49-61), to permit the polymer to cure (Column 4, lines 56-57), and to open the tool and remove the article (Column 4, line 57). Lehmann and Cook are combinable because they are concerned with a similar technical field, namely, that of molding processes that create sifting screens. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Lehmann's specific molding process to make Cook's parallel wire sifting screen in order to provide a sifting screen with twice as much sifting capability.

Regarding Claim 34, Cook shows the process as claimed as discussed above, but does not show any specific mould tool features. Lehmann shows that it is known to carry out a method wherein an inward force is exerted on opposite face[s] of the wire frame assembly within the mould tool by fingers protruding inwardly from inside faces of the tool, said fingers being operable to engage the matrices when the tool closes (Figure 2, element 11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Lehmann's engaging fingers in Cook's method for making a parallel wire sifting screen in order to prevent movement of the reinforcing wire assembly within the mould cavity.

Regarding Claim 35, Cook shows the process as claimed as discussed above, but does not show a specific frame material. Lehmann shows that it is known to construct a frame for a wire assembly out of a glass-reinforced plastic material (Column 3, lines 57-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make Cook's frame with Lehmann's glass-reinforced plastic material in order to insure structural stability and strength.

Regarding Claim 36, Cook shows the process as claimed as discussed above, but does not show any specific frame features. Lehmann shows that it is known to carry out a method wherein the faces of peripheral edge regions of the support frame over which woven cloth overlies and to which the cloth is to be bonded by heating are formed during manufacture with a plurality of substantially parallel ridges, the ridges being susceptible to soften on heating to bond onto the cloth laid thereover so that the cloth penetrates and becomes embedded in softened crests of the ridges (Column 4, lines 21-31; Column 5, lines 4-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to bond the cloth to the ridges of the frame, as in Lehmann, during manufacturing of Cook's parallel wire sifting screen in order to insure structural stability of the entire sifting screen.

Regarding Claim 37, Cook shows the process as claimed as discussed above, including a method in which edge regions include an outer peripheral flange surrounding a central region occupied by an integral matrix of interconnecting struts, the flange and struts are formed with ridges where they engage the wirecloths, and the ridges extend to different heights so that corresponding crests of ridges lie in different parallel planes (Figures 6-8), meeting applicant's claim.

Regarding Claim 38, Cook shows the process as claimed as discussed above, including a method wherein spacers are located within the wire frame assembly, each attached to one or other of the arrays of reinforcing wires so as to extend towards the other, whereby any tendency for the arrays to collapse inwards during moulding is resisted by the spacers (Figure 4, elements 48, 52, 54, 56, 58, 60, 62, 50; Column 5, lines 34-36), meeting applicant's claim.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook and Lehmann as applied to claims 33-38 above, and further in view of Rosato's Injection Molding Handbook (2nd ed.). Cook and Lehmann show the process as claimed as discussed above, but do not show mobile pins. Rosato shows that it is known to carry out a molding process, wherein there are retractable pins which engage an article and accurately locate it within the tool, and the pins are retracted as the tool opens after the moulding step has been completed (Page 218). Rosato and Cook are combinable because they are concerned with a similar technical field, namely, that of molding desired articles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Rosato's retractable pins during Cook's molding of a parallel wire sifting screen in order to insure proper placement of the wire assembly within the mold cavity during the molding process.

Allowable Subject Matter

Claims 39, and 41-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claim 39, the prior art of record neither teaches nor suggests the claimed process of constructing a polymer support frame over which woven wire cloth is to be stretched and secured to form a sifting screen wherein fingers comprise pegs which align with crossing points of wires in upper and lower reinforcing [arrays] to space the [arrays] from the corresponding upper and lower internal surfaces of the mould tool. Regarding Claims 41-42, the prior art of record neither teaches nor suggests the claimed process of constructing a polymer support frame over which woven wire cloth is to be stretched and secured to form a sifting screen wherein the pins are separably joined to the ends of the wires by means of sleeves of plastic material, and wherein each sleeve becomes embedded in the polymer during moulding and remains in the polymer as the pin which engages it is retracted as the tool is opened.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art regarding molding sifting screens in general:

U.S. Patent 2,723,032 to Gisler et al.

U.S. Patent 5,076,924 to Persson et al.

U.S. Patent 5,137,622 to Souter

U.S. Patent 5,851,393 to Carr et al.

U.S. Patent 6,202,857 to Keller et al.

U.S. Patent 6,237,780 to Schulte

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U.S. Patent 6,305,549 to Riddle et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A Fontaine whose telephone number is 703-305-7239. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill L. Heitbrink can be reached on 703-308-0673. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9310 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

maf
July 11, 2003



JILL L. HEITBRINK
PRIMARY EXAMINER
ART UNIT ~~137~~-1732

7/14/03